

Safety Evaluation Number¹: SE-W375-00-00032Revision No: 0ABCN Number: ABCN-W375-00-00030Safety Evaluation Subject: Clarification of commitments in ISMP 3.7 and 3.9.2**PART I: DESCRIPTION OF THE PROPOSED REVISION, BACKGROUND, AND SCHEDULE**

1. Describe the proposed revision (including credible failure modes, if applicable).

- A. ISMP 3.7, Revise “building and operating a full scale melter” to “operating a pilot melter”
- B. ISMP 3.9.2, Revise “Process vessel vents are treated to scrub out radioactive particulates before passing through filter media.” to “Melter offgas streams are treated to scrub...”

There are no credible failure modes applicable to the proposed changes. In changing from a full-scale melter to a pilot melter, the project will maintain a level of testing to verify the acceptability of the design. Scrubbing of process vessel vent streams prior to filtration was proposed as an ALARA feature to reduce the potential radioactive particulate buildup on filtration media. As the process design has progressed, engineering has determined that the only stream that requires scrubbing prior to filtration is the melter offgas. The removal of the scrubbing from the other vessel ventilation streams does not impact any credible failure mode.

2. Identify the affected Authorization Basis (AB) documents and perform a comparison and assessment of the revision against the AB.

- A. The proposed revision to ISMP 3.7 changes the details used to describe the program of research and development for new or novel uses of existing technologies or processes. The ISMP includes the use of full-scale melters as part of the development work. However, engineering has determined that a development program that uses test melters or other small-scale pilot melters, with test results validated during the cold testing at the facility can provide the information needed without the additional cost of building and operating a full-scale melter. Therefore, the design can progress supported by research and development program without the need to build and operate a full-scale melter.
- B. In ISMP 3.9.2, several design practices used to maintain exposures ALARA are described. One practice described involves scrubbing the process vessel ventilation system streams, prior to filtration, to reduce the radioactive particulate buildup on the filter media. As the design has progressed, engineering has determined that the level of radioactive particulate in process vessel ventilation streams (other than the melter offgas streams) are not expected to reach a level that would challenge ALARA exposure guidelines or justify the extra expenditure of scrubbers. However, the expected radioactive particulate levels in the offgas streams do justify the use of scrubbers.

3. List the references used for the safety evaluation.

BNFL-5193-ISP-01, Rev. 4b, Integrated Safety Management Plan, Nov. 9, 1999
DOE/RL-96-0006, Revision 1, July 1998 TOP-LEVEL RADIOLOGICAL, NUCLEAR, AND PROCESS
SAFETY STANDARDS AND PRINCIPLES FOR TWRS PRIVATIZATION CONTRACTORS

4. Describe the planned revision implementation schedule.

The change will be implemented by changing the affected pages in the ISMP. The changed pages will be issued within 30 days after RU approval of the amendment request

¹ The Safety Evaluation Number shall be obtained from Project Document Control.

PART II: REGULATORY IMPACT OF PROPOSED AB REVISION

The following questions are to be answered as part of the safety evaluation, to determine if the proposed AB revision (and the proposed initiating change if applicable) requires prior RU approval.

- | | <u>YES</u> | <u>NO</u> |
|---|-------------------------------------|-------------------------------------|
| 1. Does the revision involve the deletion or modification of a standard previously identified or established in the approved SRD? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| JUSTIFICATION: | | |
| The change from using a full-scale melter to pilot melters does not impact standards in the approved SRD. Limiting the use of scrubbers to melter offgas streams as opposed to all process vessel ventilation streams does not impact standards in the SRD | | |
| 2. Does the revision result in a reduction in commitment currently described in the AB? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| JUSTIFICATION: | | |
| The commitments to use proven practices and to maintain exposures ALARA are still maintained with the proposed revisions to the ISMP. However, the change in the techniques discussed in the ISMP could be considered to be a reduction in commitment in the methods to be employed in maintaining these policies. | | |
| 3. Does the revision result in a reduction in the effectiveness of any program, procedure, or plan described in the AB. | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| JUSTIFICATION: | | |
| The policies of using proven engineering practices and maintaining exposures ALARA, as described in the AB, will continue to be effective, despite the changes in details of the implementation. | | |

Note: Guidance on defining the terms and responding to the above questions is provided in K70C528, Code of Practice for Managing Changes to the Authorization Basis, Appendix 6.

If all the answers to the above questions are no, then the change can be made without prior RU approval.

If any of the above answers is yes, then RU approval is required prior to implementation of the AB revision (and the initiating change if applicable). An ABAR shall be prepared to obtain RU approval (see K70C528, Appendix 7.)

PART III: SAFETY EVALUATION CONCLUSION

- ☐ All PART II questions are answered No. Therefore, RU approval is NOT required prior to implementing the proposed AB revision (and initiating change where applicable).
- ☒ At least one PART II question is answered Yes. Therefore, RU approval IS required prior to implementing the proposed AB revision (and initiating change where applicable). Issuance of an ABAR is required to obtain RU approval.

Evaluator/Originator

April 20, 2000
Date

Reviewer²

Date

² The reviewer should be a person from the same department as the Evaluator/Originator and at least as qualified as the Evaluator/Originator to conduct safety evaluations.

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Safety Evaluation

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ABCN Number: ABCN-W375-00-00030

Safety Evaluation Subject: Clarification of commitments in ISMP 3.7 and 3.9.2

Radiological, Nuclear, and Process Safety Manager

Date

Chair, Project Safety Committee³

Date

RPP-WTP General Manager³

Date

³ This signature required if Safety Evaluation concludes AB change can be made without RU prior approval. If RU approval (ABAR) is required, PSC and GM signatures occur on the ABAR.